

Patent Claims

1. Vent plug system (10) for a cell opening of a storage battery, with a plug element (16) incorporating an inner cartridge (12) and a valve element (14), said plug element (16) being cup-shaped and having an outer contour (18) designed for insertion in and sealing of the cell opening, with an interior cavity (20) and with a gas port (28) between said cavity (20) and the outside (24), said inner cartridge (12) being essentially cylindrical and having an outer contour (36) designed for insertion in the cavity (20) of the plug element and including a gas passage (26) that opens into said cavity (20), while the valve element (14) is designed as a separate entity which can be locked in place in the cavity (20) by the inner cartridge (12) and which as a function of the gas pressure establishes a gas-flow connection (22) between the gas passage (26) of the inner cartridge (12) and the gas port (28) of the plug element (16), the inner cartridge (12) and the plug element (16) can be joined in gas-tight fashion and the inner cartridge (12) is provided with an installation fitting (30) which in the assembled state of the system protrudes at least partly from the cavity (20) of the plug element (16).
2. Vent plug system as in claim 1, characterized in that the installation fitting (30) is ring-shaped.
3. Vent plug system as in one of the preceding claims, characterized in that the installation fitting (30) consists of two concentrically positioned annular elements (32, 34).
4. Vent plug system as in claim 2 or 3, characterized in that the annular installation fitting elements (32, 34) are in the form of ring segments.
5. Vent plug system as in claim 3 or 4, characterized in that the outer ring (32) can be welded to the plug element (16).

6. Vent plug system as in one of the preceding claims, characterized in that the plug element (16) is provided with a backstop (44) for the inner cartridge (12).
7. Vent plug system as in one of the preceding claims, characterized in that the plug element (16) is provided with a valve countersupport (38).
8. Vent plug system as in one of the preceding claims, characterized in that the valve element (14) is a valve configuration (14) featuring a pressure-responsive, movable valve lip (40).
9. Vent plug system as in one of the preceding claims, characterized in that the plug element (16) and the inner cartridge (12) are injection-molded components.
10. Vent plug system as in claim 9, characterized in that the sprues of the injection-molded elements are located outside the sealing and other functional surface areas.